(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)
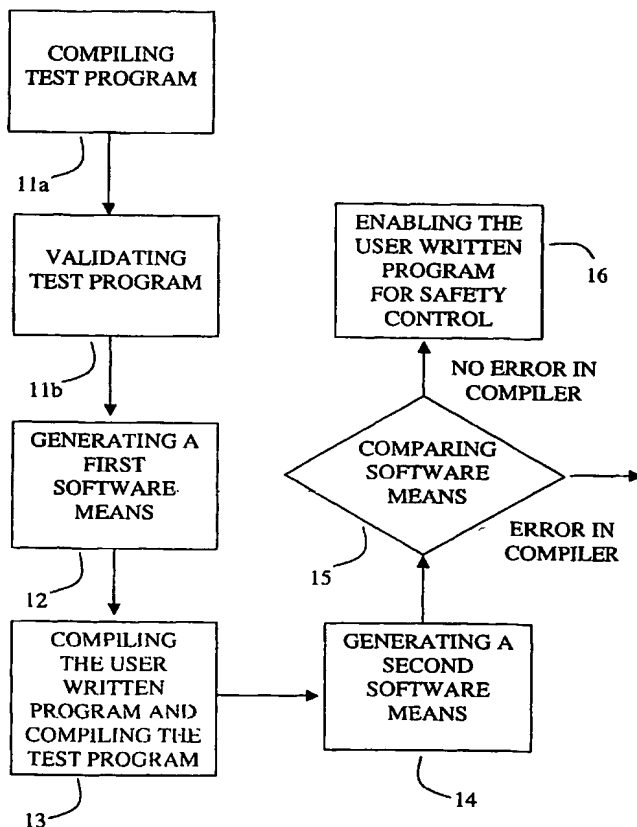
[NO/NO]; Myrsletta 21, N-1406 Ski (NO). GUNN-MARKER, Mats [NO/NO]; Smiuvegen 99, N-0981 Oslo (NO). HANSEN, Kai [NO/NO]; Lyseskrenten 38, N-0383 Oslo (NO).

(74) Common Representative: ABB AS; c/o ABB AB, Legal & Compliance/Intellectual Property, Forskargränd 8, S-721 78 Västerås (SE).

[Continued on next page]

(54) Title: REVALIDATION OF A COMPILER FOR SAFETY CONTROL

(57) Abstract: The present invention concerns revalidation of a compiler of control language for use in an industrial control system, each time the compiler has been used. In particular, the invention reveals a method to revalidate a compiler for compilation of a user-written program, which is intended for safety control of real world entities. The user-written program subject to compilation by the compiler is intended for execution in a device, which comprises functionality that adds safety features to an industrial control system. The invention ensures that no fault is introduced into the device due to error in the compiler code. Such an error may, for instance, occur during distribution of the compiler code or due to failure in a computer's memory or failure on a disk where the compiler code is stored. Hence, the invention ensures that no such fault is introduced into the control of real world entities which otherwise could lead to accidents that harm people or cause damage to the environment.

WO 2004/003739 A1

(84) Designated States *(regional)*: ARIPO utility model (GH), ARIPO patent (GH), ARIPO utility model (GM), ARIPO patent (GM), ARIPO utility model (KE), ARIPO patent (KE), ARIPO utility model (LS), ARIPO patent (LS), ARIPO utility model (MW), ARIPO patent (MW), ARIPO utility model (MZ), ARIPO patent (MZ), ARIPO utility model (SD), ARIPO patent (SD), ARIPO utility model (SL), ARIPO patent (SL), ARIPO utility model (SZ), ARIPO patent (SZ), ARIPO utility model (TZ), ARIPO patent (TZ), ARIPO utility model (UG), ARIPO patent (UG), ARIPO utility model (ZM), ARIPO patent (ZM), ARIPO utility model (ZW), ARIPO patent (ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.